



STIRLING TECHNOLOGY COMPANY

...powering the 21st Century

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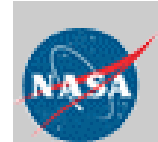
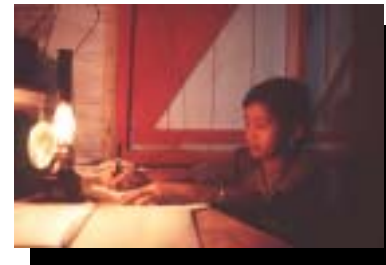
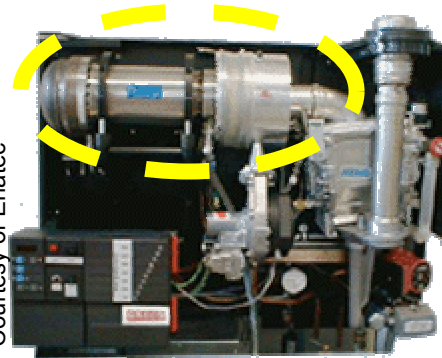
STC's People, Technology and Partners enable...

- Zero-maintenance, long-life space power systems
- 96% efficient combined heat and power systems
- Locally-fueled systems for clean water and reliable power

Courtesy of JPL



Courtesy of Enatec



About STC

- Leading developer of Stirling engine generators
- Growing, financially stable and cash-flow positive
- Focused on realizing the potential of Stirling cycle machines
- Privately-held and predominantly employee-owned

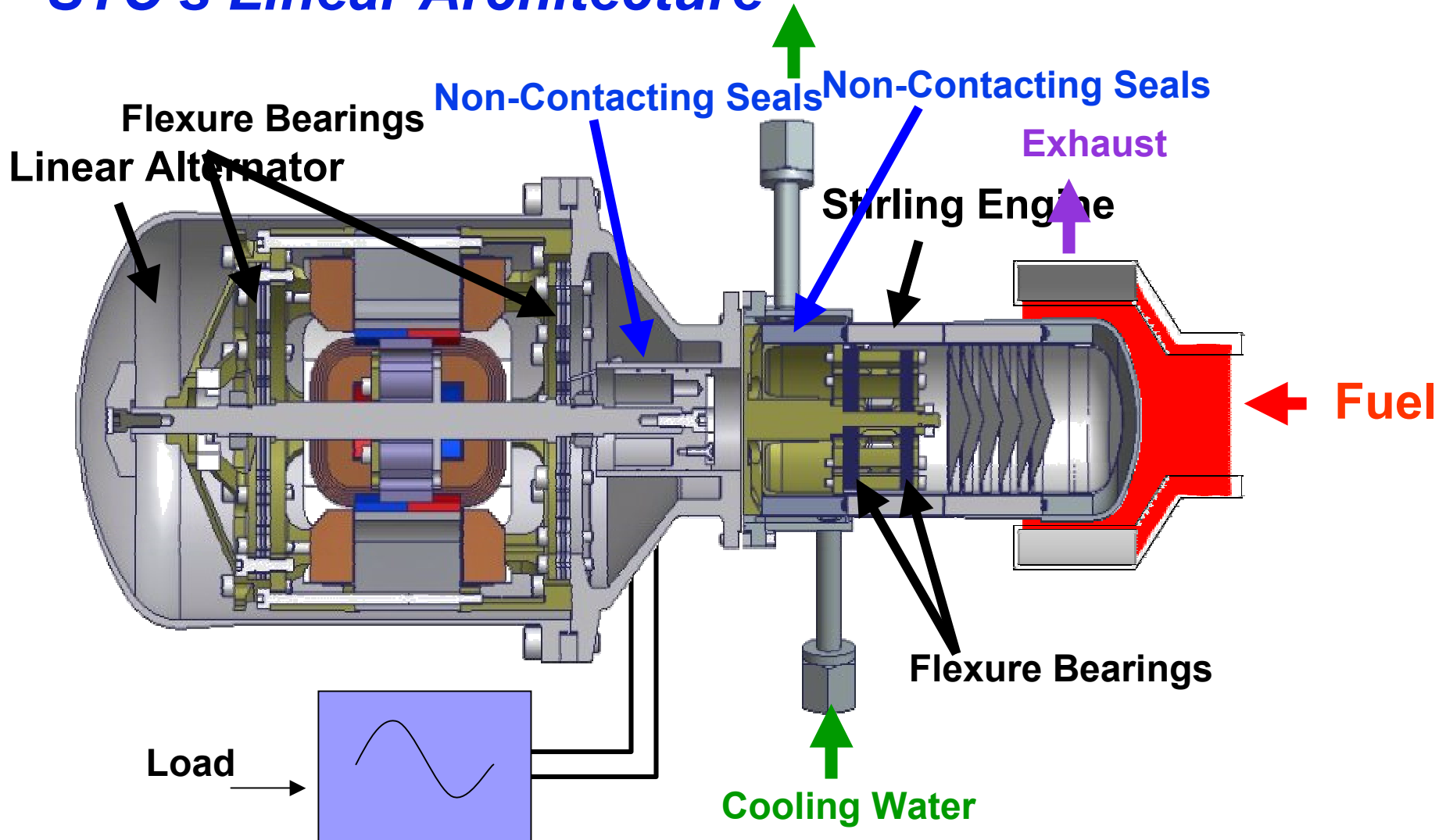


STC's Strategy: 4 Elements

1. ***Developing and delivering*** very reliable space power systems
2. ***Selling products*** into high value markets
3. ***Licensing technology*** into mass markets
4. ***Driving technology advancement*** and STC commercial objectives through public and private funding

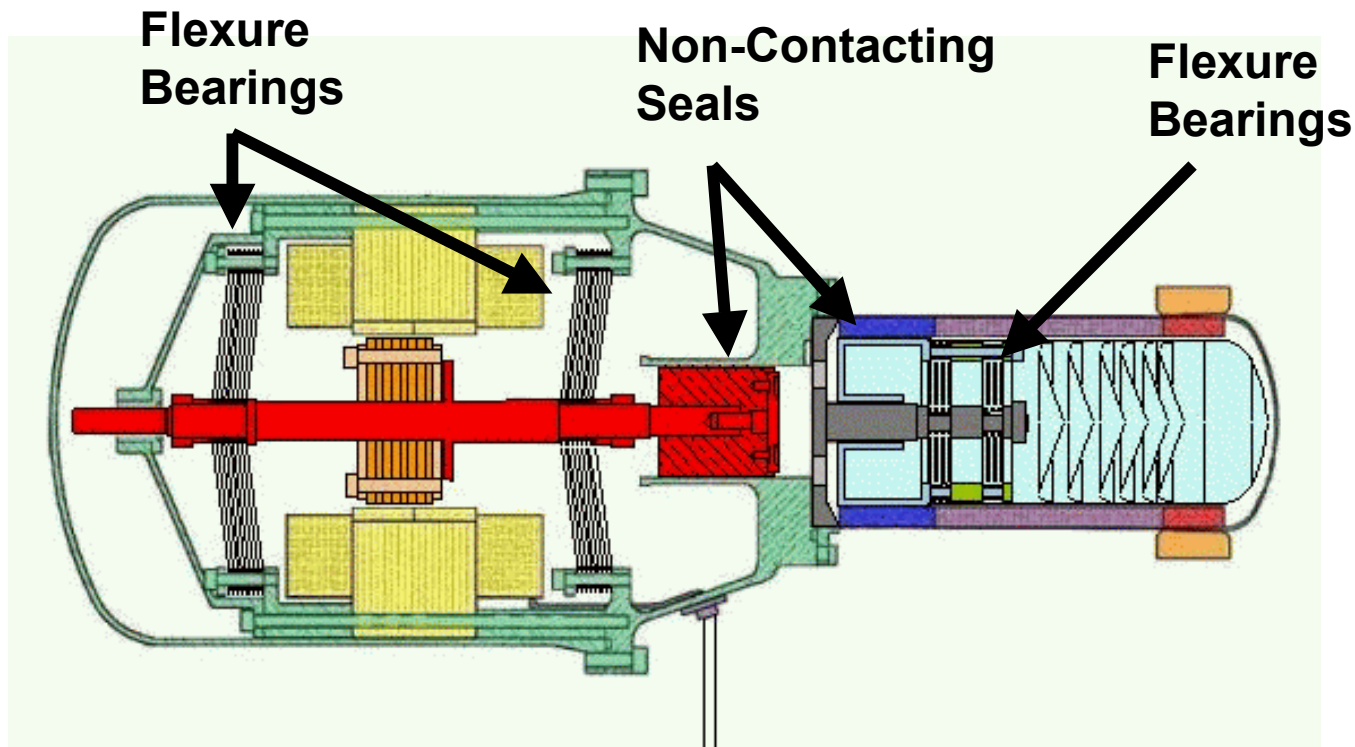


STC's Linear Architecture



STC's Stirling Engine Generator

Capacity:	a few watts – 5 kW
Output:	50 Hz, 60 Hz, 100V – 400V
Efficiency:	10%-25% 96% CHP mode
Fuel System:	External Combustion



STC's Technology Advantages

- **Proven Reliability and Long Life**
 - *9+ years continuous operation on long run-time unit*
 - *Passed NASA launch-load testing*
- **Zero Maintenance Prime Mover**
- **Very Quiet Operation**
- **Highly Adaptable Products**
- **Favorable Production Basis**
 - *Simple hardware*
 - *Common materials and processes*



Element 1: Develop and Deliver

Space Power Generators

- **Scope** Deliver multiple radioisotope power generators
- **Duty Cycle** Continuous power – 14 years
- **Drivers** Science
Environmental (4x efficiency)
National security
- **Market Potential** \$100 million to \$150 million
- **STC Difference** Efficiency, reliable performance
Space-flight qualified (in process)
- **Status** \$23+ million backlog, multi-year contracts



Courtesy of NASA

...because there is no aftermarket in deep space



Element 2: Sell Products Into High Value Markets

Example: Micro Remote Power Systems

- **Power Range** 200 W – 5 kW, AC and DC
- **Application** SCADA, Valve Control, Cathodic Protection, Critical Circuit Protection
- **Size of Market** \$50 million - \$75 million per year
- **Market Drivers** CapEx for new facilities
- **Competing Technologies** Thermal systems, turbines, PV / batteries
- **STC Difference** Reliable, zero-maintenance prime mover
Improved efficiency

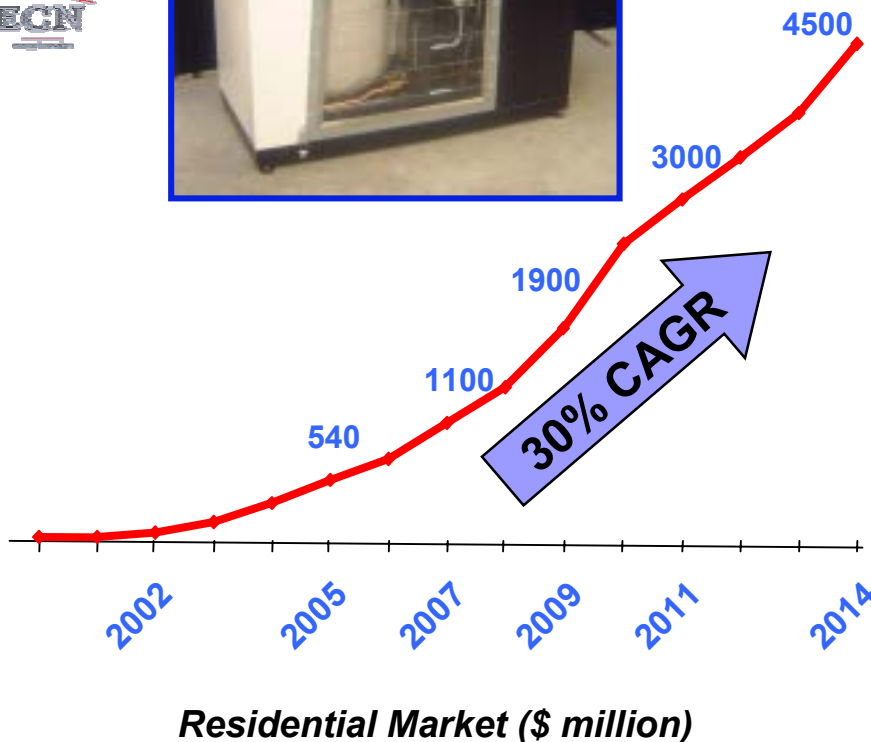


Element 3 – License into Mass Markets

Example: European Residential CHP Market



Courtesy of Enatec



Source: Frost & Sullivan + Business Analysis

Target:

- Boilers: 6+ million units/year

Growth Drivers:

- CO₂ Reduction (Kyoto)
- Energy Savings

Considerations

- Price Point, Grid Interface
- Sales and Distribution Channels

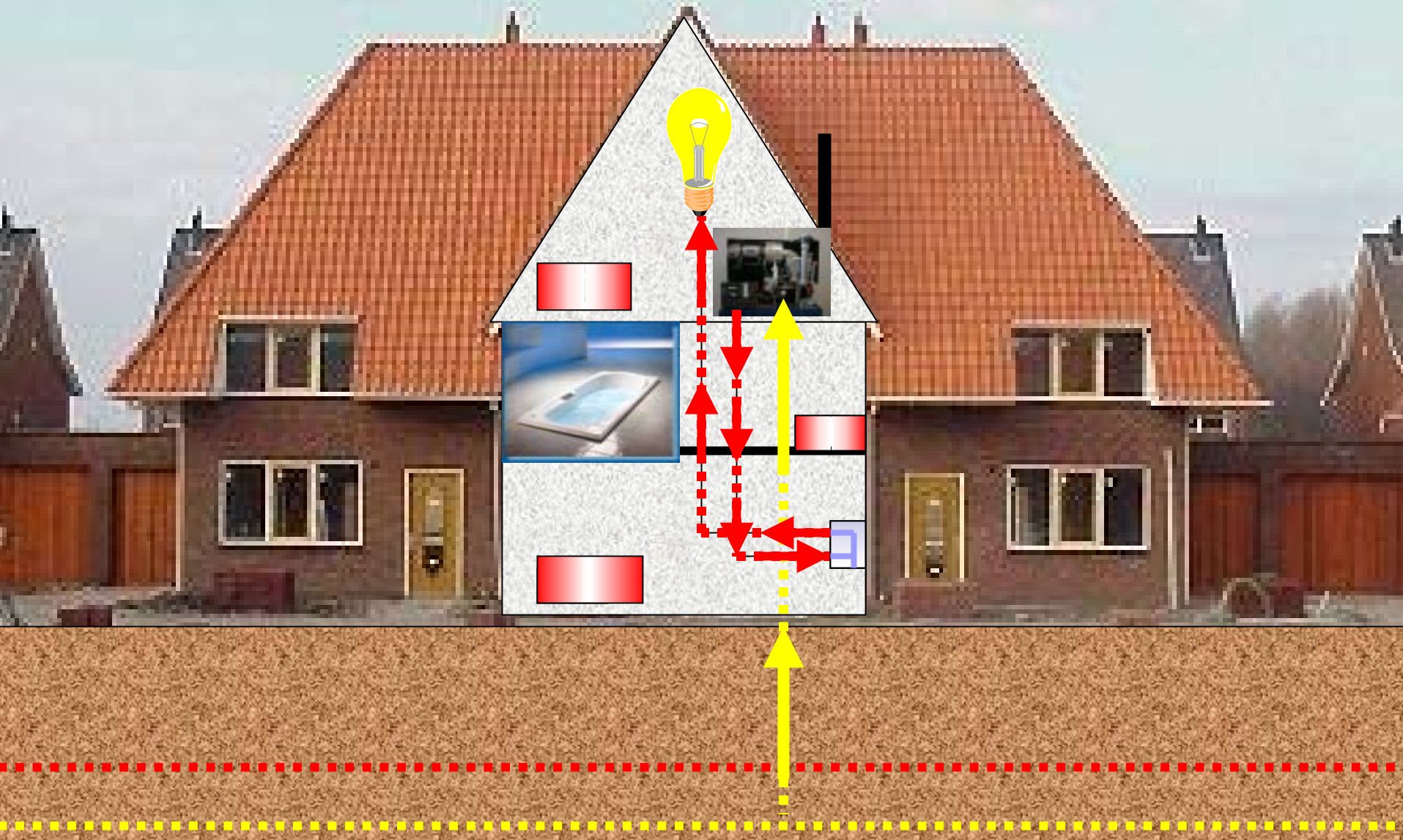
STC Status

- European licensees in place
 - ✓ ENATEC
 - ✓ "Confidential"
- "Beta" field trials underway
- Launch: late 2004
- Ramp: 2005



Element 3: License into Mass Markets

Example: European Residential CHP Market



Animation courtesy of ENATEC

Element 4:

Drive Technology Development with Public / Private R&D \$

Radioisotope Power Systems
Project Prometheus – JIMO
\$23 million backlog

Army/Natick Labs
CHP for Military Field Kitchens
\$730,000, beginning late '03

DOE High Temperature
Superconductor
\$3 million, beginning early '04

Private Development
Ongoing 3rd party funding

- Financial stability
- Robust design/hardware
- ISO 9001 level processes
- Technology advancement

- Commercial CHP system
- Diesel burner

- Low cost alternator
- Pulse tube interface

- CHP modules
- Linear compressor
- Pressure wave generator
- Larger systems



Applications & Future Markets



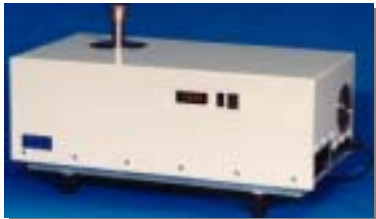
**Radioisotope
Power
Generators**



CHP Modules



**Pressure Wave
Generators**



Cryocoolers

<ul style="list-style-type: none"> ■ Mars Lander ■ Jupiter Icy Moons Orbiter ■ Other/Military 	\$100 million + Product Sales
<ul style="list-style-type: none"> ■ CHP Markets (Japan, etc.) ■ Always-On Premium Power ■ Stand-Alone Remote Power ■ Biomass Power 	\$ Undetermined Licensing
<ul style="list-style-type: none"> ■ Oil-Free Compression ■ High Temperature Superconductor Coolers 	\$ Undetermined Product Sales, Licensing
<ul style="list-style-type: none"> ■ Home-Based Gas Liquefiers ■ Diagnostic Tools ■ Refrigeration/Cooling 	\$25 billion + Licensing

STC's Management Team

J.D. Sitton, Chairman, CEO and President, 8 years business formation, technology and service commercialization

Maury White, Founder, Board Member, CTO, 35 years experience with linear drive Stirling system development

Tom Mitchell, Board Member, CFO, 12 years experience with internal audit, public and private accounting

Jim Clyde, Vice President, Marketing and Business Development, 15 years of new market development, service delivery, business formation and technology development

Ray Erbeznik, Director, Commercial Programs, 16 years experience with linear drive Stirling system development and commercialization

Dr. Songgang Qiu, Chief Engineer, 21 years thermal system analysis and hardware development, system testing

Steve Petersen, Director, Government Programs, 15 years program management



STC's Advisory Board

- *Dr. Ake Almgren*, President, Orkas Corp.; previously CEO, Capstone Turbine Corporation, president, ABB Power T&D, president, Autoliv
- *Scott Magrane*, Investment Banking; previously vice president, Goldman Sachs
- *Dorrance Noonan*, Consultant to Briggs and Stratton; previously CEO, Briggs and Stratton Power Systems and CEO, Generac Power Systems
- *Dennis Orwig*, CEO, Encorp; previously vice president, ABB



Conclusions:

STC...

- Is a stable, growing company
- Has developed enabling technologies
- Is shifting from development to commercialization
- Has a viable, 4-point strategy
- Has an experienced and capable team
- Is gaining commercial momentum



Courtesy of JPL



Courtesy of Enatec



STC is looking for commercial partners





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